AMENDMENTS TO THE CLAIMS

The following is a complete listing of revised claims with a status identifier in parenthesis.

LISTING OF CLAIMS

1.   (Currently Amended) A method for post-processing raw magnetic resonance data, comprising:

filtering the raw magnetic resonance data;

Fourier transforming the filtered data;

forming a first magnetic resonance signal from an absolute value of the Fourier transformed filtered data results;

Fourier transforming the raw magnetic resonance data;

forming a second magnetic resonance signal from an absolute value of the Fourier transformed raw magnetic resonance data; and

forming a post-processed magnetic resonance signal from a weighted combination of the first and second magnetic resonance signals; wherein

the two magnetic resonance signals are weighted such that the contribution of one of the magnetic resonance signals to the weighted combination is formed by multiplying this magnetic resonance signal by a weighting factor, with the weighting factor depending on the other of the magnetic resonance signals such that it is relatively greater when an absolute value of this magnetic resonance signal is large and relatively less when the absolute value is small.

2.   (Original)   The method as claimed in claim 1, wherein the raw magnetic resonance data are filtered using a second filter, separate from a first filter used in first filtering the raw magnetic resonance data, before the Fourier transformation used in forming the second magnetic resonance signal.

3.   (Original)   The method as claimed in claim 1, wherein the raw magnetic resonance data are filtered after demodulation.

4.   (Original)   The method as claimed in claim 1, wherein the raw magnetic resonance data are obtained using a magnetic resonance spectroscopy unit.

5.   (Original)   The method as claimed in claim 1, wherein the raw magnetic resonance data are obtained using a magnetic resonance tomography unit.

6.   (Original)   The method as claimed in claim 1, wherein the filtering is done using a low pass filter.

7.   (Original)   The method as claimed in claim 6, wherein the low pass filter is a type of Hanning filter.

8. (Original) The method as claimed in claim 1, wherein the filtering is done using a high pass filter.

9. (Original) The method as claimed in claim 8, wherein the high pass filter is a type of inverse Hanning filter.

10. (Original) The method as claimed in claim 1, wherein the raw magnetic resonance data are data for at least one of a one-dimensional and multidimensional space to be examined.

11. (Original) The method as claimed in claim 1, wherein the Fourier transformation maintains the dimensionality of the raw magnetic resonance data.

12. (Original) The method as claimed in claim 1, wherein the weighted combination involves addition of the absolute values of the magnetic resonance signals.

13. (Canceled)

14. (Original) The method as claimed in claim 1, wherein, for the weighted combination, the contribution of one of the magnetic resonance

signals has a nonlinear dependency on the absolute value of the other magnetic resonance signal

15. (Previously Presented) The method as claimed in claim 1, wherein the weighted combination of the two magnetic resonance signals is weighted by two parameters λ and κ results in the post-processed magnetic resonance signal in the following manner:

$$C = A + \lambda \left(\frac{B}{A_{max}} \right)^{\kappa} B, \text{ where}$$

A is one of the magnetic resonance signals,

B is the other of the magnetic resonance signals,

A_{max} is the maximum of the magnetic resonance signal A, and

C is the post-processed magnetic resonance signal.

16. (Original) The method as claimed in claim 15, wherein the parameter λ is in the range between 0 and 3.

17. (Original) The method as claimed in claim 15, wherein the parameter κ is in the range between 0 and 3.

18. (Currently Amended) The method as claimed in claim 1, wherein more than two magnetic resonance signals are obtained from the raw magnetic

resonance data by filtering, ~~and are subjected to a weighted combination to form a post-processed magnetic resonance signal~~.

19.   (Original)   A magnetic resonance tomography unit matched to a method for post-processing raw magnetic resonance data as claimed in claim 1.

20.   (Original)   A magnetic resonance spectroscopy unit matched to a method for post-processing raw magnetic resonance data as claimed in claim 1.

21.   (Original)   The method as claimed in claim 2, wherein the raw magnetic resonance data are filtered after demodulation.

22.   (Original)   The method as claimed in claim 2, wherein the raw magnetic resonance data are obtained using a magnetic resonance spectroscopy unit.

23.   (Original)   The method as claimed in claim 2, wherein the raw magnetic resonance data are obtained using a magnetic resonance tomography unit.

24.   (Original)   The method as claimed in claim 3, wherein the raw magnetic resonance data are obtained using a magnetic resonance spectroscopy unit.

25.   (Original)   The method as claimed in claim 3, wherein the raw magnetic resonance data are obtained using a magnetic resonance tomography unit.

26.   (Original)   The method as claimed in claim 2, wherein at least one of the filters is a low pass filter.

27.   (Original)   The method as claimed in claim 26, wherein the low pass filter is a type of Hanning filter.

28.   (Original)   The method as claimed in claim 2, wherein at least one of the filters is a high pass filter.

29.   (Original)   The method as claimed in claim 28, wherein the high pass filter is a type of inverse Hanning filter.

30.   (Original)   The method as claimed in claim 2, wherein the raw magnetic resonance data are data for at least one of a one-dimensional and multidimensional space to be examined.

31.   (Canceled)

32.   (Original)   The method as claimed in claim 2, wherein, for the weighted combination, the contribution of one of the magnetic resonance signals has a nonlinear dependency on the absolute value of the other magnetic resonance signal.

33.   (Currently Amended)   The method as claimed in claim [[31]] 32, wherein the same nonlinear dependency is used at least in one dimension of the raw magnetic resonance data.

34.   (Currently Amended)   The method as claimed in claim 1 [[13]], wherein, for the weighted combination, the contribution of one of the magnetic resonance signals has a nonlinear dependency on the absolute value of the other magnetic resonance signal.

35.   (Original)   The method as claimed in claim 16, wherein the parameter κ is in the range between 0 and 3.

36.   (Original)   A magnetic resonance tomography unit matched to a method for post-processing raw magnetic resonance data as claimed in claim 2.

37. – 39 (Canceled)

40. (Original) A magnetic resonance tomography unit matched to a method for post-processing raw magnetic resonance data as claimed in claim 18.

41. (Original) A magnetic resonance spectroscopy unit matched to a method for post-processing raw magnetic resonance data as claimed in claim 18.

42. (Original) A magnetic resonance tomography unit matched to a method for post-processing raw magnetic resonance data as claimed in claim 34.

43. (Original) A magnetic resonance spectroscopy unit matched to a method for post-processing raw magnetic resonance data as claimed in claim 34.

44. (Original) The method as claimed in claim 2, wherein the first filtering is done using a low pass filter and the second filtering is done using a high pass filter.

45. (Original) The method as claimed in claim 44, wherein the low pass filter is a type of Hanning filter and wherein the high pass filter is a type of inverse Hanning filter.

46.   (Original) A magnetic resonance tomography unit matched to a method for post-processing raw magnetic resonance data as claimed in claim 44.

47.   (Original) A magnetic resonance spectroscopy unit matched to a method for post-processing raw magnetic resonance data as claimed in claim 45.

48.   (Currently Amended)   A   method   for   post-processing   raw magnetic resonance data, the method comprising:

filtering the raw magnetic resonance data;

Fourier transforming the filtered data;

forming a first magnetic resonance signal from the Fourier transformed filtered data results;

Fourier transforming the raw magnetic resonance data;

forming a second magnetic resonance signal from the Fourier transformed raw magnetic resonance data; and

forming a post-processed magnetic resonance signal from a combination of the first and second magnetic resonance signals; wherein

the two magnetic resonance signals is weighted such that the contribution of one of the magnetic resonance signals to the weighted combination is formed by multiplying this magnetic resonance signal by a

weighting factor, with the weighting factor depending on the other of the magnetic resonance signals such that it is relatively greater when an absolute value of this magnetic resonance signal is large and relatively less when the absolute value is small.